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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/522,730

02/01/2005

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EXAMINER

MOUTAOUAKIL, MOUNIR

ART UNIT

PAPER NUMBER

2419

MAIL DATE

DELIVERY MODE

05/26/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/522,730	Applicant(s) BIANCO ET AL.	
	Examiner MOUNIR MOUTAOUAKIL	Art Unit 2419	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 April 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02-01-2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 04-09-2009 has been entered.

Response to Amendment

2. The amendment filed on 04-09-2009 has been entered and considered.

Claims 1-13 are pending in this application.

Claims 1-13 remain rejected as discussed below.

Specification

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Drawings

4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the **multistage** allocation switch system, and **requests** must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended

replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 101

5. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim(s) 1-13 is/are rejected under 35 U.S.C. 101 as not falling within one of the four statutory categories of invention. While the claims recite a series of steps or acts to be performed, a statutory “process” under 35 U.S.C. 101 must (1) be tied to another statutory category (such as a particular apparatus), or (2) transform underlying subject matter (such as an article or material) to a different state or thing. The instant claims neither transform underlying subject matter nor positively tie to another statutory category that accomplishes the claimed method steps, and therefore do not qualify as a

statutory process. The claims do not qualify as statutory process because they are directed to an abstract idea and recite purely mental steps.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claims 1-13 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Regarding claim 1, The specification discloses "... and one or more further stages in which allocation rules are applied to allocate requests remaining unallocated by the previous stage". However, in the specification, it is not disclosed, what is meant by a stage, and how the other stages determine the requests remaining unallocated by the previous stage. The specification does not contain sufficient information to enable the broad scope of the claims. The examiner respectfully requests the applicant to show in the specification (page and line, or drawing) how the claimed limitation is achieved. Moreover, with regards to the incorporation elements. An incorporation by reference of essential material to an unpublished U.S. patent application, a foreign application or patent, or to a publication is improper under 37 CFR 1.57(c). The improper incorporation by reference is not effective to incorporate the material unless corrected by the

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applicant (37 CFR 1.57(g)). See also *In re Hawkins*, 486 F.2d 569, 179 USPQ 157 (CCPA 1973); *In re Hawkins*, 486 F.2d 579, 179 USPQ 163 (CCPA 1973); *In re Hawkins*, 486 F.2d 577, 179 USPQ 167 (CCPA 1973).

Claim 2 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The added subject matter which is not adequately described in the original disclosure is as follow: "...unallocated switch requests are reserved for allocation to a subsequent frame".

Claims 3-13 are rejected because they depend on a rejected claim.

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 1-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, the recitation of "generating an allocation plan for the switch for the frame of defined number of packets, by a first stage in which allocation rules are applied such that the number of requests from each input port to each output port is no greater than the defined number of packets, and one or more further stages in which allocation rules are applied to allocate requests remaining unallocated by the previous stage" is

vague, confusing and indefinite it is not clear what it is meant by a stage. As best understood, a stage is a phase of processing requests.

Claims 2-13 are rejected because they depend on a rejected claim.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. Claims 1-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Hill (Application publication No. WO01/67803A1).

Regarding **claim 1**, Hill discloses a method of allocating switch requests within a packet switch(See page 4, lines 12-14, allocating switch requests), the method comprising the steps of

(a) generating switch request data for each input port indicative of the output ports to which data packets are to be transmitted (See page 4, lines 15-17, generating switch request);

(b) processing the switch request data for each input port to generate request data for each input port-output port pairing (See page 4, lines 16-17, processing switch request);

(c) generating an allocation plan for the switch for a frame of a defined number of packets, by a first stage in which allocation rules are applied such that the number of

requests from each input port and to each output port is no greater than the defined number of packets (See page 5, lines 3-7, allocation plan), and one or more further stages in which allocation rules are applied to allocate requests remaining unallocated by the previous stage (See page 5, lines 19-20).

Regarding **claim 2**, Hill discloses a method according to claim 1, wherein unallocated switch requests are reserved allocation to a subsequent frame (See page 5, lines 19-20).

Regarding **claim 3**, Hill discloses a method according to claim 1, wherein at least one of the stages is a process comprises the steps of

(a) generating switch request data for each input port indicative of the output ports to which data packets are to be transmitted (See page 4, line 15, generating switch request);

(b) processing the switch request data for each input port to generate request data for each input port-output port pairing (See page 4, lines 16-17, processing switch request);

(c) generating an allocation plan by reducing the number of queue requests relating to each of one or both sets of ports by a value such that the number of requests relating to each member of the set or sets of ports is no greater than a predetermined frame value (See page 4, lines 21-29).

Regarding **claim 4**, Hill discloses a method according to claim 3, wherein the transformation of the request data is done by using the summations of the requests from each input port (See page 9, lines 1-3).

Regarding **claim 5**, Hill discloses a method according to claim 3, wherein the transformation of the request data is done by using the summations of the requests to each output port (See page 9, lines 1-3).

Regarding **claim 6**, Hill discloses a method according to claim 3, wherein the reduction of the request data from each input port and to each output port is done, in such cases where the number of requests is greater than the maximum capacity of the corresponding input port or corresponding output port, the reduction being by a factor selected such that the number of requests from the corresponding input port and to the corresponding output port is no greater than the maximum capacity of the corresponding input port and the corresponding output port (See page 4, lines 18-29).

Regarding **claim 7**, Hill discloses a method according to claim 3, wherein the reduction of the request data from each input port and to each output port is done using a common factor selected such that the number of requests from each input port and to each output port is no greater than the maximum request capacity of each input port and each output port (See page 4, lines 21-27).

Regarding **claim 8**, Hill discloses a method according to claim 3, wherein the reduction of the request data comprises (a) reducing the number of requests to each output port; and (b) reducing the number of requests in the resulting reduced request data that exceeds the capacity of each input port (See page 4, lines 24-29).

Regarding **claim 9**, Hill discloses a method according to claim 3, wherein the transformation of the request data comprises (a) reducing the number of requests from each input port; and (b) reducing the number of requests in the resulting reduced request data that exceeds the capacity of each output port (See page 4, lines 24-29).

Regarding **claim 10**, Hill discloses a method according to claim 3, wherein the process is iterative, and is repeated one or more times in respect of input ports and output ports for which capacity remains available after the previous iteration is complete (See page 5, lines 15-19).

Regarding **claim 11**, Hill discloses a method of packet switching wherein the input port-output port routing is allocated according to the method of claim 1 and the packets are switched on the basis of the allocated routing (See page 4, lines 30-32 and page 5 lines 3-7).

Regarding **claim 12**, Hill discloses a packet switch in which the input port-output port routing is allocated in accordance with the method of claim 1 (See page 5, lines 3-8).

Regarding **claim 13**, Hill discloses a packet switch according to claim 12, wherein packets are switched from an input port to a specified output port in accordance with the allocated routing (See page 5, lines 3-8).

Response to Arguments

3. Applicants' arguments filed on 04-09-2009 have been fully considered but they are not persuasive.

Applicants' representative argues that the 112 rejection is erroneous and the original disclosure teaches the limitation recited in claim 2.

Examiner respectfully disagrees, examiner reviewed page 4, lines 6-8 and page 17 lines 8-11 and found no direct teaching to what is being claimed. The sections indicated by the applicants' representative state respectively: "Therefore, either some packets will not be switched, (the data either being discarded or held over to the next frame), or some slots will be unused as there are not enough packets to use them all" and "FIG. 2 shows that the prior art systems are only capable of achieving a 90% throughput, while using the present embodiment it is able to achieve 100% throughput". However, the sections do not teach "unallocated switch requests are reserved for allocation to a subsequent frame". Therefore, the 112 rejection is maintained.

Applicants representative argues that the prior art of record fails to teach that the invention is directed to operating the allocation for each frame as a series of two or more separate stages.

Examiner respectfully disagrees. Claims should be interpreted in light of the specification disclosure, it is generally considered improper to read limitations contained in the specification into the claims. See *In re Prater*, 415 F.2d 1393, 162 USPQ 541 (CCPA 1969) and *In re Winkhaus*, 527 F.2d 637, 188 USPQ 129 (CCPA 1975), which discuss the premise that one cannot rely on the specification to impart limitations to the claim that are not recited in the claim. The claim language does not specifically teach that the operation of the allocation process for each frame as a series of two or more separate stages. Moreover, the prior art of record clearly states "reserving unallocated

switch requests for use in the next phase of switch request allocation" (page 5, lines 19-20).

Conclusion

Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

In the case of amending the claimed invention, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

When responding to this office action, applicants are advised to clearly point out the patentable novelty which they think the claims present in view of the state of the art disclosed by the references cited or the objections made. Applicants must also show how the amendments avoid such references or objections. See 37C.F.R 1.111(c). In addition, applicants are advised to provide the examiner with the line numbers and pages numbers in the application and/or references cited to assist examiner in locating the appropriate paragraphs.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MOUNIR MOUTAOUAKIL whose telephone number is (571)270-1416. The examiner can normally be reached on Monday-Thursday (1pm-4:30pm) eastern time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz R. Sheikh can be reached on 571-272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/M. M./

Examiner, Art Unit 2419

/Ayaz R. Sheikh/

Supervisory Patent Examiner, Art Unit 2419